**PERCENTAGE LOG OF WATER-WELL CUTTINGS**
UTAH GEOLOGICAL SURVEY

DWRi Appropriation #: 66-406(a28166) Well Owner: U.S. Bureau of Land Management

Location: (C-17-1)5ddb, Sanpete County, Utah Win #: 35237

Driller: Midway Drilling Geologist: Janae Wallace, 1/4/07

| DEPTH RANGE (FEET) | | PERCENTAGES | | | COMMENTS |
|---|---|---|---|---|---|
| | | dis* | consolidated | | |
| | | volc* | volc* | tuff | |
| 0 | 5 | 100 | 0 | tr | white clay, silt, and sand-sized grains/crystals? composed dominantly of quartz with feldspar, mafic minerals, magnetite, and lithic fragments and trace tuff; grains are subangular to rounded; slightly calcareous; Tertiary volcanics? |
| 5 | 10 | 100 | 0 | tr | " trace light green clay |
| 10 | 15 | 100 | 0 | tr | " |
| 15 | 20 | 100 | 0 | tr | " |
| 20 | 25 | 100 | 0 | tr | " |
| 25 | 30 | 100 | 0 | tr | " tan |
| 30 | 35 | 100 | 0 | tr | " |
| 35 | 40 | 98 | 0 | 2 | tan clay, silt, and sand-sized grains/crystals? composed dominantly of quartz with feldspar, mafic minerals, magnetite, and lithic fragments and minor tuff; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 40 | 45 | 98 | 0 | 2 | " |
| 45 | 50 | 98 | 0 | 2 | " |
| 50 | 55 | 100 | 0 | 0 | tan clay, silt, and sand-sized grains/crystals? composed dominantly of quartz with feldspar, mafic minerals, magnetite, and lithic fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 55 | 60 | 100 | 0 | 0 | " |
| 60 | 65 | 100 | 0 | 0 | " |

*dis=disaggregated; volc=volcaniclastics

| DEPTH RANGE (FEET) | | PERCENTAGES | | | COMMENTS |
|---|---|---|---|---|---|
| | | dis* | consolidated | | |
| | | volc* | volc* | tuff | |
| 65 | 70 | 100 | 0 | 0 | “ |
| 70 | 75 | 100 | 0 | 0 | tan clay, silt, and sand-sized grains/crystals? composed of quartz, feldspar, mafic minerals, magnetite, and lithic fragments (dominantly volcanic rock fragments); grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 75 | 80 | 100 | 0 | 0 | “ |
| 80 | 85 | 100 | 0 | 0 | “ |
| 85 | 90 | 100 | 0 | 0 | “ |
| 90 | 95 | 100 | 0 | 0 | “ trace orange clay |
| 95 | 100 | 100 | 0 | 0 | “ |
| 100 | 105 | 100 | 0 | 0 | “ |
| 105 | 110 | 100 | 0 | 0 | “ |
| 110 | 115 | 0 | 50 | 50 | gray-green and pink volcaniclastics with tuff; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 115 | 120 | 0 | 50 | 50 | “ |
| 120 | 125 | 0 | 50 | 50 | gray-green and pink volcaniclastics with tuff; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 125 | 130 | 25 | 50 | 25 | gray-tan and pink silt and sand-sized grains/crystals, volcaniclastics, and tuff; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |

*dis=disaggregated; volc=volcaniclastics

| DEPTH RANGE (FEET) | | PERCENTAGES | | | COMMENTS |
|---|---|---|---|---|---|
| | | dis* | consolidated | | |
| | | volc* | volc* | tuff | |
| 130 | 135 | 10 | 50 | 40 | “ |
| 135 | 140 | 0 | 50 | 50 | gray-green, pink, yellow, and gray volcaniclastics with tuff; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 140 | 145 | 0 | 95 | 5 | “ |
| 145 | 150 | 0 | 90 | 10 | “ |
| 150 | 155 | 0 | 80 | 20 | “ tan gray, green tan, pink, and gray |
| 155 | 160 | 0 | 80 | 20 | “ |
| 160 | 165 | 0 | 80 | 20 | “ |
| 165 | 170 | 0 | 80 | 20 | “ |
| 170 | 175 | 0 | 80 | 20 | “ |
| 175 | 180 | 0 | 50 | 50 | “ |
| 180 | 185 | 0 | 50 | 50 | “ |
| 185 | 190 | 0 | 50 | 50 | tan-gray, green-tan, gray, and pink volcaniclastics with tuff; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 190 | 195 | 0 | 80 | 20 | “ |
| 195 | 200 | 0 | 80 | 20 | “ |
| 200 | 205 | 10 | 80 | 10 | gray-tan and pink silt and sand-sized grains/crystals, volcaniclastics, and tuff; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |

*dis=disaggregated; volc=volcaniclastics

| DEPTH RANGE (FEET) | | PERCENTAGES | | | COMMENTS |
|---|---|---|---|---|---|
| | | dis* | consolidated | | |
| | | volc* | volc* | tuff | |
| 205 | 210 | 10 | 80 | 10 | “ |
| 210 | 215 | 0 | 80 | 20 | gray-tan and pink volcaniclastics with tuff; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 215 | 220 | 0 | 50 | 50 | “ |
| 220 | 225 | 0 | 50 | 50 | “ |
| 225 | 230 | 0 | 50 | 50 | “ |
| 230 | 235 | 0 | 75 | 25 | “ |
| 235 | 240 | 0 | 75 | 25 | “ |
| 240 | 245 | 0 | 75 | 25 | “ |
| 245 | 250 | 10 | 80 | 10 | gray, gray-tan, and pink sand-sized grains/crystals, volcaniclastics, and tuff; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 250 | 255 | 0 | 100 | 0 | gray-tan volcaniclastics; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 255 | 260 | 0 | 100 | 0 | “ |
| 260 | 265 | 0 | 100 | 0 | “ |

*dis=disaggregated; volc=volcaniclastics

| DEPTH RANGE (FEET) | | PERCENTAGES | | | COMMENTS |
|---|---|---|---|---|---|
| | | dis* | consolidated | | |
| | | volc* | volc* | tuff | |
| 265 | 270 | 100 | 0 | 0 | gray-tan and pink silt and sand-sized grains/crystals; grains are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 270 | 275 | 95 | 5 | 0 | gray-tan and pink silt and sand-sized grains/crystals and volcaniclastics; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 275 | 280 | 10 | 90 | 0 | “ |
| 280 | 285 | 90 | 10 | 0 | “ |
| 285 | 290 | 60 | 20 | 20 | gray-tan and pink silt and sand-sized grains/crystals, volcaniclastics, and tuff; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 290 | 295 | 90 | 10 | 0 | gray-tan and pink silt and sand-sized grains/crystals and volcaniclastics; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 295 | 300 | 90 | 10 | 0 | “ |
| 300 | 305 | 100 | 0 | 0 | gray-tan and pink silt and sand-sized grains/crystals; grains are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded |

*dis=disaggregated; volc=volcaniclastics

| DEPTH RANGE (FEET) | | PERCENTAGES | | | COMMENTS |
|---|---|---|---|---|---|
| | | dis* | consolidated | | |
| | | volc* | volc* | tuff | |
| | | | | | (some quartz is subhedral to euhedral); slightly calcareous |
| 305 | 310 | 90 | 10 | 0 | gray and pink sand-sized grains/crystals and volcaniclastics; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 310 | 315 | 75 | 25 | 0 | " |
| 315 | 320 | 20 | 75 | 5 | gray-tan and pink silt and sand-sized grains/crystals, volcaniclastics, and tuff; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 320 | 325 | 20 | 75 | 5 | gray-tan and pink silt and sand-sized grains/crystals, volcaniclastics, and tuff; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 325 | 330 | 0 | 95 | 5 | gray-tan and pink volcaniclastics and tuff; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 330 | 335 | 0 | 95 | 5 | " |
| 335 | 340 | 0 | 90 | 10 | " |
| 340 | 345 | 100 | 0 | 0 | gray-tan and pink silt and sand-sized grains/crystals; grains are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded |

*dis=disaggregated; volc=volcaniclastics

| DEPTH RANGE (FEET) | | PERCENTAGES | | | COMMENTS |
|---|---|---|---|---|---|
| | | dis* | consolidated | | |
| | | volc* | volc* | tuff | |
| | | | | | (some quartz is subhedral to euhedral); slightly calcareous |
| 345 | 350 | 100 | 0 | 0 | “ |
| 350 | 355 | 0 | 95 | 5 | gray-tan and pink volcaniclastics and tuff; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 355 | 360 | 0 | 95 | 5 | “ |
| 360 | 365 | 0 | 95 | 5 | “ |
| 365 | 370 | 0 | 95 | 5 | “ |
| 370 | 375 | 0 | 90 | 10 | “ |
| 375 | 380 | 0 | 95 | 5 | gray-tan and pink volcaniclastics and tuff; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 380 | 385 | 0 | 90 | 10 | “ |
| 385 | 390 | 0 | 90 | 10 | “ |
| 390 | 395 | 0 | 90 | 10 | “ |
| 395 | 400 | 0 | 90 | 10 | “ |
| 400 | 405 | 100 | 0 | tr | gray-tan and pink silt and sand-sized grains/crystals; grains are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); trace tuff; slightly calcareous |
| 405 | 410 | 100 | 0 | tr | “ |
| 410 | 415 | 98 | 0 | 2 | “ minor tuff |
| 415 | 420 | 75 | 25 | tr | gray, purple, and red silt and sand-sized |

*dis=disaggregated; volc=volcaniclastics

| DEPTH RANGE (FEET) | | PERCENTAGES | | | COMMENTS |
|---|---|---|---|---|---|
| | | dis* | consolidated | | |
| | | volc* | volc* | tuff | |
| | | | | | grains/crystals and volcaniclastics; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); trace tuff; slightly calcareous |
| 420 | 425 | 50 | 50 | tr | “ |
| 425 | 430 | 50 | 50 | tr | “ |
| 430 | 435 | 50 | 50 | tr | “ |
| 435 | 440 | 50 | 50 | tr | “ |
| 440 | 445 | 100 | 0 | tr | gray, purple, and pink silt and sand-sized grains/crystals; grains are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); trace tuff; slightly calcareous |
| 445 | 450 | 50 | 50 | tr | gray, purple, white, and red silt and sand-sized grains/crystals and volcaniclastics; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); trace tuff; slightly calcareous |
| 450 | 500 | 0 | 0 | 0 | no sample |
| 500 | 505 | 100 | 0 | 0 | gray, tan, purple, and pink silt and sand-sized grains/crystals; grains are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 505 | 510 | 100 | 0 | 0 | “ |
| 510 | 515 | 100 | 0 | 0 | “ |
| 515 | 520 | 100 | 0 | 0 | gray, tan, purple, and pink silt and sand-sized grains/crystals; grains are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly |

*dis=disaggregated; volc=volcaniclastics

| DEPTH RANGE (FEET) | | PERCENTAGES | | | COMMENTS |
|---|---|---|---|---|---|
| | | dis* | consolidated | | |
| | | volc* | volc* | tuff | |
| | | | | | calcareous |
| 520 | 525 | 100 | 0 | 0 | “ |
| 525 | 530 | 90 | 10 | 0 | gray, tan, purple, and pink silt and sand-sized grains/crystals and volcaniclastics; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 530 | 535 | 90 | 10 | 0 | “ |
| 535 | 540 | 50 | 50 | 0 | “ |
| 540 | 545 | 50 | 50 | 0 | “ |
| 545 | 550 | 50 | 40 | 10 | gray, tan, purple, and pink silt and sand-sized grains/crystals, volcaniclastics, and tuff; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 550 | 555 | 20 | 80 | 0 | gray, tan, and pink silt and sand-sized grains/crystals and volcaniclastics; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 555 | 560 | 20 | 80 | 0 | “ |
| 560 | 565 | 80 | 20 | 0 | “ |
| 565 | 570 | 50 | 50 | 0 | “ |
| 570 | 575 | 90 | 10 | 0 | “ |
| 575 | 580 | 100 | 0 | 0 | gray, tan, and pink silt and sand-sized grains/crystals; grains are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |

*dis=disaggregated; volc=volcaniclastics

| DEPTH RANGE (FEET) | | PERCENTAGES | | | COMMENTS |
|---|---|---|---|---|---|
| | | dis* | consolidated | | |
| | | volc* | volc* | tuff | |
| 580 | 585 | 100 | 0 | 0 | “ |
| 585 | 590 | 100 | 0 | 0 | “ |
| 590 | 595 | 80 | 10 | 10 | gray, tan, purple, and pink silt and sand-sized grains/crystals, volcaniclastics, and tuff; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 595 | 600 | 80 | 10 | 10 | “ |
| 600 | 700 | 0 | 0 | 0 | no sample |
| 700 | 705 | 25 | 25 | 50 | orange-pink, white, and gray silt and sand-sized grains/crystals, volcaniclastics, and tuff; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz is subhedral to euhedral); slightly calcareous |
| 705 | 710 | 25 | 25 | 50 | “ |
| 710 | 715 | 25 | 25 | 50 | “ |
| 715 | 720 | 25 | 25 | 50 | “ |
| 720 | 725 | 25 | 25 | 50 | “ |
| 725 | 730 | 10 | 10 | 80 | “ |
| 730 | 735 | 10 | 10 | 80 | “ |
| 735 | 740 | 5 | 5 | 90 | orange-pink tuff with silt and sand-sized grains/crystals, and volcaniclastics; volcaniclastics are composed of quartz, feldspar, mafic minerals, magnetite, and volcanic rock fragments; grains are subangular to rounded (some quartz and biotite is subhedral to euhedral); slightly calcareous |
| 740 | 745 | 5 | 5 | 90 | “ |
| 745 | 750 | 5 | 5 | 90 | “ |
| 750 | 765 | 0 | 0 | 0 | no sample |

*dis=disaggregated; volc=volcaniclastics